

ABSTRACT

Agents for blocking T cell-mediated immune reactions are provided. Such agents
5 are peptides, referred to hereinafter as "CD28 peptide mimetics", of from 15 to 30 amino
acids in length. The CD28 peptide mimetics comprise the hexapeptide motif 'MYPPPY'
or a retro-inverso isomer thereof. The CD 28 peptide mimetics further comprise flanking
sequence at the amino and carboxyl terminus of the hexapeptide motif. Such flanking
sequence permit the CD28 peptide mimetic to assume a polyproline II (PPII)
10 conformation when placed in water or a buffered solution at physiological pH and a
temperature of about 25° C. Methods for treating subjects with T cell mediated
autoimmune diseases or disorders are also provided. Such methods comprise
administering one or more of the CD 28 peptide mimetics to a subject which has such
disease or disorder. 30. The present invention also relates to a method of blocking
15 activation and proliferation of CD4+ cells. The method comprises contacting such cells
with one or more of the present CD 28 peptide mimetics.